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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Ram R. Rao

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EXAMINER

WENDMAGEGN, GIRUMSEW

ART UNIT

PAPER NUMBER

2621

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DELIVERY MODE

12/24/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/681,885	RAO, RAM R.	
	<b>Examiner</b>	<b>Art Unit</b>	
	GIRUMSEW WENDMAGEGN	2621	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 06 October 2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)         | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)         | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/6/2009 has been entered.

### ***Response to Arguments***

Applicant's arguments with respect to claim 1-28 have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claim 1, 7-23, 25-28** is rejected under 35 U.S.C. 103(a) as being unpatentable over Kawai et al (Patent No US 7,409,146), and further in view of Zimmermann (Pub No US 2003/0147631).

Regarding claim 1, 12, 19, 23, 26, Kawai et al (hereinafter Kawai) teaches a method for storing a received program, comprising: storing, by a computing device (see fig. 1, the received program as a first digital copy having a first quality level on a storage medium (see column 1 line 44-46); converting, by the computing device, the first digital copy into a second digital copy of the received program, having a second quality level lower than the first quality level (see column 2 line 3-9; fig. 5); storing, by the computing device, the second digital copy along with the first digital copy on the storage medium (see fig. 5 s24, column 2 line 3-9) but does not teach determining periodically, by the computing device, space left available in the storage medium; and after a period of time during which both copies are available for a potential replaying for a user, applying, by the computing device, a retention policy which instructs deletion of at least one of the stored first and second digital copies based at least in part on a result of said determining. However Zimmermann teaches determining periodically, by the computing device, space left available in the storage medium (see fig. 8 step 816); and after a period of time during which both copies are available for a potential replaying for a user, applying, by the computing device, a retention policy which instructs deletion of at least one of the stored first and second digital copies based at least in part on a result of said determining (see fig. 8 step 834).

One of ordinary skill in the art at the time the invention was made would have been motivated to delete previously recorded content as in Zimmermann because it would allow the user to record new content.

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Regarding claim7, Kawai teaches the method of claim 1, further comprising: determining, by the computing device, a bit rate and an encoding format for the first and second digital copies, wherein the first and second quality levels are determined based at least in part on the bit rate and the encoding format utilized (see fig. 3 HD and SD column1 line44-53).

Regarding claim8,Kawai teaches the method of claim 1, wherein the first and second quality levels are determined based at least in part on a bit rate utilized to encode the first and second digital Copies (see fig. 3 HD and SD column1 line44-53).

Regarding claim9, Kawai teaches the method of claim 1, wherein the first and second quality levels are determined based at least in part on an encoding format utilized to encode the first and second digital copies (see fig. 3 HD and SD column1 line44-53).

Regarding claim10, 11, see the teaching of Kawai and Zimmermann above. Both do not teach recording the third copy with one of the first and second copy. However, it is obvious to one of ordinary skill in the art to copy multiple times the same content with different quality in order to perform different process.

Regarding claim13, Zimmermann teaches the method of claim 12, wherein stored copies of the first program each have an associated retention policy, and wherein the deleting the at least one of the first higher quality copy and the first lower quality copy is performed based at least in part on said associated retention policies (see paragraph 0068, storage manager preferably delete previously recorded item).

Regarding claim14,15, Zimmermann teaches the method of claim 13, wherein the deleting the at least one of the first higher quality copy and the first lower quality copy is performed based at least in part on storage requirements for the second higher quality copy of the second program (see figure8 step816 and 834).

Regarding claim16, 27, Kawai teaches the method of claim 12, further comprising: receiving, by the computing device, the second program (see column1 line44-46); second converting, by the computing device, the second program into the second higher quality copy and a second lower quality copy (see column1 line44-53); and storing, by the computing device, the second higher and lower quality copies in the storage medium (see column1 line44-53, fig. 3).

Regarding claim17, 28, Kawai teaches the method of claim 12, further comprising: determining, by the computing device, a first quality level associated with the first program, wherein converting the first program into the first higher quality copy

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comprises encoding the first program with a bit rate determined based at least in part on the first quality level (see column1 line44-53).

Regarding claim18, Zimmermann teaches the method of claim 12, further comprising: applying, by the computing device, selected ones of global policies to all stored copies; and altering, by the computing device, the stored programs in accord with a selected global policy (see paragraph 0067-0068).

Regarding claim20, Kawai teaches the PVR of claim 19, wherein the transcoder stores the higher and at least one lower quality copies of the program as components of a scalable bit stream (see fig.5 column1 line44-53).

Regarding claim21, Zimmermann teaches the PVR of claim19, wherein applying a policy-includes the storage manager deleting the higher quality copy of the program from the storage after a period of time during which both copies are available for a potential replaying for a user (see fig. 8 step 834; paragraph 0067-0068).

Regarding claim22, Kawai teaches the PVR of claim 19, further comprising: a video decoder configured to be used in conjunction with retrieving a best available copy of the program from the storage, configured to convert the best available copy of the program into an output format suitable for presentation to a display (see fig.1 MPEG decoder 16).

Regarding claim 25, Kawai teaches the article of claim 23, wherein the programming instructions are further designed to, upon execution, enable the apparatus: determine a first bit rate for encoding the first digital copy (see column 1 line 44-53); and determine a second bit rate for encoding the second digital copy (see fig. 3 HD and SD column 1 line 44-53); wherein the first and second quality levels are respectively determined based at least in part on the first and second bitrates (see fig. 3 HD and SD column 1 line 44-53).

**Claim 2-6, 24** is rejected under 35 U.S.C. 103(a) as being unpatentable over Kawai et al (Patent No US 7,409,146) and Zimmermann (Pub No US 2003/0147631) as applied to claim 1, 7-23, 25-28 above, and further in view of Greenwood (pub No US 2003/0198458).

Regarding claim 2, 24, see the teaching of Kawai and Zimmermann above. Both do not teach receiving, by the computing device, a request to schedule a recording of the program; determining, by the computing device, a recording quality and a longevity for the program; and associating, by the computing device, the recording quality and longevity with the program, wherein applying the retention policy is performed based at least in part on associated desired longevity. However Greenwood teaches receiving, by the computing device, a request to schedule a recording of the program (see paragraph 0002); determining, by the computing device, a recording quality and a longevity for the program (see paragraph 0018); and associating, by the computing



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device, the recording quality and longevity with the program (see paragraph 0019), wherein applying the retention policy is performed based at least in part on associated desired longevity (see paragraph 0019).

One of ordinary skill in the art at the time the invention was made would have been motivated to determining a recording quality and longevity as in Greenwood because it would make managing storage device capacity much effective.

Regarding claim3, Greenwood teaches the method of claim 2, wherein the recording quality comprises high, medium and low quality (see paragraph 0022, quality levels low, medium and high).

Regarding claim4, Greenwood teaches the method of claim 2, wherein determining the quality and longevity comprises a selected one of: utilizing a default quality and longevity or prompting for the desired quality and longevity (see paragraph 0019).

Regarding claim5, Greenwood teaches the method of claim 2, wherein longevity comprises long, medium, and temporary, and wherein applying the retention policy further comprises comparing associated quality settings and longevity to determine which stored copy of a program is to be deleted (see paragraph 0019).

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Regarding claim6, Greenwood teaches the method of claim 1, further comprising: receiving, by the computing device, a request to schedule a recording of the program, the request having an associated quality to utilize for recording the program (see paragraph 0002); inferring, by the computing device, a longevity for the recording based on the associated quality (see paragraph 0017 ); periodically, during the inferred longevity, selecting, by the computing device, a stored copy of the program and determining a lesser quality for the stored copy based at least in part on how long of the inferred longevity the stored copy has been stored (see paragraph 0023, length of time a video has been stored); and degrading, by the computing device, the stored copy of the program in accordance with the lesser quality (see paragraph 0034).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to GIRUMSEW WENDMAGEGN whose telephone number is (571)270-1118. The examiner can normally be reached on 7:30-5:00, M-F, alr Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tran Thai can be reached on (571)272-7382. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Girumsew Wendmagegn/  
Examiner, Art Unit 2621

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